

SOS Visual Playlist Editor

User Manual

Version 5.1.0
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<http://sos.noaa.gov>

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Overview

The SOS Visual Playlist Editor is a playlist editor that allows users to graphically create, modify, and enhance presentation playlists as well as visually lay out, modify, and preview SOS datasets.

In this document, we refer to the SOS Visual Playlist Editor as **VPLE**, and the User Interface as **UI**, for short.

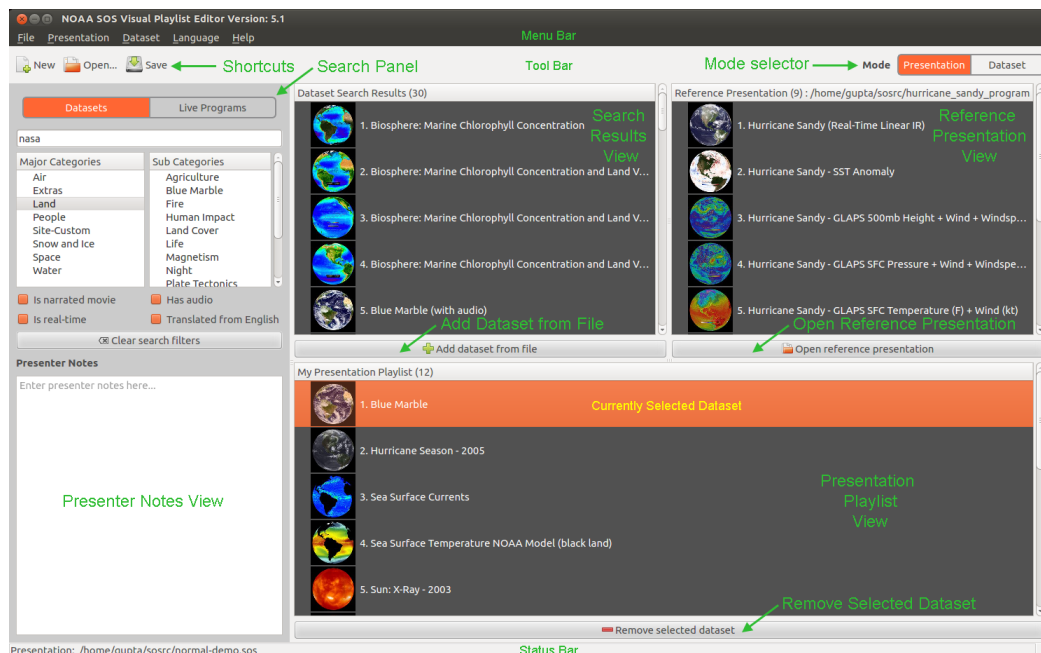
System Requirements

The SOS Visual Playlist Editor requires **Ubuntu 16.04** and **SOS software version 5.1.0**.

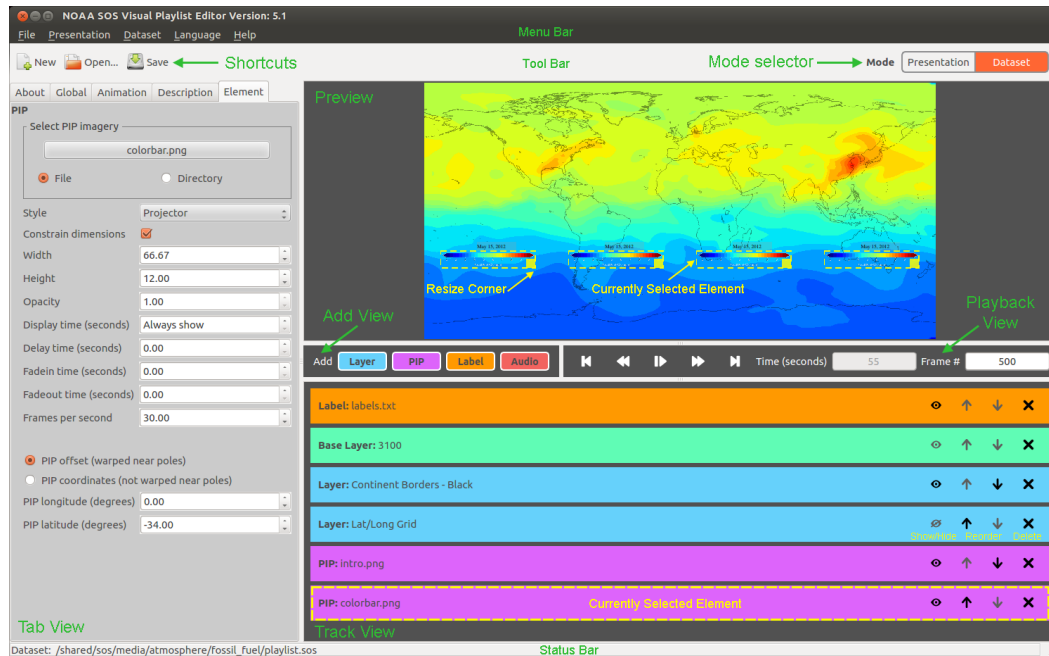
User Interface Definitions

The VPLE user interface is divided into two modes: **Presentation Mode** and **Dataset Mode**. The following two annotated screenshots identify the components that make up the two modes. The rest of this document will refer to these components.

Presentation Mode



Dataset Mode



Functions Accessible from Both Modes

Menu Bar:

- Start new presentations and datasets.
- Open existing presentations and datasets.
- Save presentations and datasets.
- Save As / Export presentations and datasets.
- Generate a presentation summary.
- Export Presenter Notes.
- Select a language.
- View VPLE version information.
- Quit the VPLE application.

Mode Selector: Toggle button located in the Tool Bar for switching between the Presentation and Dataset Modes. The highlighted toggle button signifies the currently selected Mode. From the Presentation Mode, double-clicking a dataset from the Presentation Playlist View will open that dataset in the Dataset Mode.

Status Bar: An information bar that is located at the bottom of the VPLE. This bar shows the name of the currently open presentation playlist or dataset, depending on the current mode.

Tool Bar: A shortcut to New, Open, and Save for the currently selected mode. This bar also includes the Mode Selector.

Presentation Mode

Add Dataset from File Button: Gives users the option to navigate to and add datasets that are not available in the dataset database (and are therefore not showing up in the Search Results View).

Open Reference Presentation Button: Open an existing presentation playlist into the Reference Presentation View.

Presentation Playlist View: A list of all the datasets that have been added to the presentation playlist you are currently creating. Double-clicking on a dataset will open the dataset in Dataset Mode so it can be previewed or modified.

Presenter Notes View: Add or view presenter notes to/for the currently open presentation playlist.

Reference Presentation View: View an existing presentation playlist and select datasets from it to add to your presentation playlist in the Presentation Playlist View. The number in parentheses is the number of datasets in the reference presentation playlist.

Remove Selected Dataset: Remove a selected dataset from the Presentation Playlist View.

Search Panel: The Search Panel allows you to quickly search and browse for datasets in the entire SOS Data Catalog (all of the NOAA-managed and Site-Custom datasets on your SOS computer). Simply click on any combination of filters (Major/Sub Categories, Movies/Realtime, etc.) to narrow down search results. The dataset search results will appear in the Search Results View. The toggle button at the top allows users to indicate whether they would like to search within Datasets or Live Programs.

You can also search for datasets by typing a search term in the search text field. By default, the search field searches through dataset titles, keywords, and dataset contact name/organization.

Pressing the Clear search filters button clears all filters and search terms and shows all datasets available in the SOS Data Catalog in the Search Results View.

Note: The Search Panel checkboxes are tri-state filters. This means that each checkbox supports three modes: Unchecked, Checked, and Intermediate. For example, for the Has audio checkbox:

- Unchecked and Filled is the default state, and the search will return datasets with or without audio.
- Checked (and filled in) will return datasets that DO have audio.
- Unchecked and Not Filled will return dataset that DO NOT have audio.

Note: A dataset can be tagged with more than one major and sub category, so they may appear multiple times in the Search Results View. Additionally, you may see the same name show up multiple times if you have made a copy of a NOAA dataset in Site-Custom without changing the name.

Search Results View: A list of all the datasets that match the filters selected in the Search Panel. The number in parentheses is the number of datasets found. Simply click and drag a dataset from this view to add it to the Presentation Playlist View.

Dataset Mode

Add View: Add a new Element to the dataset. (Note: New Base Data cannot be added to a dataset. Use Layers instead.)

Element: A component of a dataset. This includes:

- **Base:** The first (or only) global layer in a dataset. (Corresponds to the `data` or `datadir` keywords in SOS.) A dataset may or may not have this Element. If not, the dataset must have at least one Layer.
- **Layer:** A global Layer in a dataset. This Element may be resized.
- **PIP:** A picture-in-a-picture that is displayed on top of the Base or Layer Data.
- **Label:** A text file that contains a list of labels that runs in sync with data that is a movie or a directory of images.
- **Audio:** An audio track.

Playback View: Control playback of a dataset, and view the current playback time and frame number of the dataset. A frame number can also be typed into the Frame # text field.

Preview: Visual composite of all the Elements (ex. Layers, PIPs, Labels, etc.) that make up a dataset. Allows moving and rescaling of Elements using the mouse.

Tab View: View and modify the global attributes of a dataset (ex. Name, Sphere tilt, Frames per second, etc.) and the attributes of Elements such as a PIP's width, height, and location. Every attribute in each of the tabs corresponds to a keyword-value pair that gets written to a dataset's playlist.sos file. Please see the SOS website > Support tab > Manuals menu > Playlist Format Reference page for more detailed information on each attribute.

Track View: A list of all the Elements in the dataset shown as a set of track lanes. Clicking on an Element track lane will highlight this Element in the Preview and will show the Element's attributes in the Element Tab View. Each track lane contains 4 buttons:

- **Eye Button:** Show/Hide an Element in the Preview. This control may be disabled in some Layers if the Layer is visible (`layervisible`) attribute is unchecked.
- **Up / Down Buttons:** Reorder an Element. Note that re-ordering is only relative to an Element type, so a Layer Element will only get re-ordered relative to other Layers. The same is for PIPs. If the Element has a Lock icon, it cannot be re-ordered.
- **X / Lock Button:** If an X icon is present Element can be deleted. If a Lock icon is present, the Element cannot be deleted.

General Use

Getting the Latest SOS Database

The search and browse filters located in the Search Panel of the Presentation Mode use an SOS database that is located on the SOS computer. Most sites have automatic updates to their SOS database once per week on Mondays. However, if you have added a new Site-Custom dataset, or NOAA added a new dataset during the middle of the week that you would like to access immediately from the database, you must refresh your SOS database. To do this, simply:

1. Go to the SOS Stream GUI application on your SOS computer.
2. Select the Library menu > Update Library menu option. This may take a few minutes. Once the update is complete, your SOS database is now up-to-date and any new datasets should show up in the Search Results View when filtering.

View an Existing Dataset

In the Tool Bar, click Dataset > Open (or you can click the Open Shortcut if in Dataset Mode). Browse to a dataset of interest. Select the dataset's playlist.sos file. The path to the dataset you just opened shows up in the Status Bar on the bottom left corner of the UI. The dataset imagery will open in the Preview, and the Tabs and Track View will get populated with the dataset's attributes. Use the Playback View controls to animate through the dataset.

Modify a Dataset

For global modifications to a dataset, such as frames per second, dwell time, etc., select the Animation Tab, modify the desired attributes, and re-run the animation. When attributes are modified in the other global tabs (About, Global, and Description), the Preview and Track View in the PLE are not affected, even when you run the animation, as their usage in these views is not relevant. However, if saved, changes in these tabs will show up in SOS.

Click on an Element in the Preview or Track View. For Layers and PIPs, a yellow corner appears in the bottom right of the Element in the Preview to indicate that the Element can be rescaled by clicking and dragging on the corner (note that the current aspect ratio is maintained when using the mouse to resize). You can also use the mouse to re-position an Element in the scene. Base Data and Labels cannot be resized, and Base Data cannot be re-positioned.

When you select an Element, the Element Tab is brought to the forefront and shows all the attributes that can be modified for that Element. Changing attributes such as the data, size, position, opacity, etc. will update it in the Preview either immediately or during playback.

Note: For PIPs, you can uncheck the Constrain dimensions checkbox and use the Width and Height spin boxes to adjust the dimensions if you do not want to maintain the PIPs native aspect ratio.

Add New Elements to a Dataset

In the Add View, click the desired Element to add it to your new or existing dataset. For Layers and PIPs, a dialog will first ask you if the media is a File (ex. a single image or a movie) or a Directory (ex. a directory of image frames). For all Elements, a File Browser will pop up where you can select your data of interest.

Once you select Open, a new Element will be added to the Track View and the Preview, and the Element Tab will open up with this Element's default attributes populated. Filters have been added to the File Browser depending on the type of data you are trying to open. So, for example, when adding Audio, you will only

see audio files (.mp4, .mp3, etc.) in the browser, and for Labels, you will only see .txt files.

Save a New or Existing Dataset

Click the Dataset > Save button in the Tool Bar (or you can click the Save Shortcut if in Dataset Mode). If you have modified a NOAA-managed dataset (those datasets in the /shared/sos/media or /shared/sos/rt folder), a message prompt will pop-up explaining that this is a NOAA-managed dataset and cannot be modified, but it can be copied to another folder. Follow the prompts to proceed. If you click the Save button and you have modified a dataset that is not NOAA-managed, the dataset will save all your changes to your dataset playlist.sos file that you originally opened.

If you click Dataset > Save As, select a folder in which to save your dataset. By default, the File Browser opens up into the /shared/sos/media/site-custom/ folder, which is the folder where custom datasets should be saved. Custom datasets should be saved here so the Update Library function of SOS Stream GUI can add the dataset to the local SOS database.

If you want to save a dataset to a folder that does not exist, click the Create Folder button in the top-right hand side of the File Browser that pops up, enter a folder name, press enter, and then press Open. When creating a new dataset, at a minimum, a Name must be specified in the About Tab and at least one Layer must exist. Otherwise, a message will prompt you to add a Name and/or Layer.

Create a Presentation Playlist

Click Presentation > New (or you can click the New Shortcut if in Presentation Mode). Use the Search Panel to narrow the list of datasets in the Search Results View to find your datasets of interest. Click and drag a dataset from the Search Results View to the Presentation Playlist View. Datasets can also be added from a reference presentation playlist in the Reference Presentation View or by navigating to it by clicking the Add Dataset from File button. The Remove Selected Dataset button can be used to remove any selected datasets in the Presentation Playlist View.

Modify a Presentation Playlist

To modify (add, delete, or reorder) the datasets in an existing presentation playlist, first open the presentation into the Presentation Playlist View by clicking on Presentation > Open (or you can click the Open Shortcut if in Presentation mode). Add datasets from the Search Results View, Reference Presentation View, or Add Dataset from File button. Use the Remove Selected Dataset button

to remove datasets you do not want. Click and drag a dataset to re-order it within the list.

To make modifications to a dataset in a presentation, double-click the desired dataset in the Presentation Playlist View, which will open it in the Dataset Mode. Then, modify global attributes or modify/add Elements as described in the sections above related to Dataset Mode.

When you are done modifying the dataset, click the Presentation tab in the Mode Selector to get back to the presentation playlist.

Note: Layer and PIP Elements may not always be modifiable within a presentation playlist. Presentation playlists consist of a list of datasets whose playlist files have been linked via the `include` keyword. Layer and PIP Elements specified inside the linked dataset may not be editable because they are defined within a different file (i.e. the dataset playlist.sos file, not the presentation playlist file). Editing these elements would require editing the linked dataset, which is not allowed. For example, you cannot modify or delete an existing Layer/PIP, but you can add a new Layer/PIP. You also cannot delete an Audio or Label Element, but you can modify them (i.e. select a different audio file or label file from the Element Tab).

Save a Presentation Playlist

Once you are done editing a presentation playlist, click Presentation > Save (or you can click the Save Shortcut if in Presentation Mode). A pop-up message will ask you to confirm that you want to save. If you want to save the presentation under a different name, click Presentation > Save As and then give the presentation a name with no spaces or special characters. The .sos file extension will be automatically added.

Export a Presentation Playlist

This option will package everything in your presentation playlist into a single folder in /shared/sos/media/site-custom. Once packaged, the presentation can be easily shared with other SOS sites and NOAA.

To export, simply click on Presentation > Export. A pop-up file browser will appear and you'll need to either create a new folder for the presentation playlist or choose an existing one. Choosing an existing folder will delete the contents of that folder before exporting, but you will be prompted if that folder is not empty. Once saved, a subfolder for each dataset in the presentation playlist is created that contains any elements that have been modified or added. NOAA-managed data will not be copied, but will be referenced with an absolute path.

A presentation.sos presentation playlist file is also created in the main folder that references each of the subfolders that contain the datasets.

Generate a Summary of a Presentation Playlist

Click Presentation > Generate Summary to create a PDF file that is a list of every dataset name in the presentation playlist, along with their thumbnails. Presenter Notes, if available, are appended to the bottom of the list. This can be saved anywhere on the system.

Export Presenter Notes

Click Presentation > Export Presenter Notes to create a PDF file that contains the Presenter Notes for the open presentation playlist. This can be saved anywhere on the system.

Localization / Translation

The VPLe's UI may be localized (i.e. translated) to other languages. Note that the SOS Data Catalog, including datasets, categories, etc., is not shown in non-English languages in version 5.1, but that is planned for a future version. The VPLe UI uses a third-party application called [Qt Linguist](#) to assist you in translating from English to other languages. Please see the [SOS Translations Guide](#) for more information (located at *SOS website > Support tab > Manuals menu > SOS Translations Guide menu option*).

Once translations are in place, to set the language, simply click on the Menu Bar > Language menu item and select the language of interest from the drop-down box. The VPLe UI will get dynamically translated. Untranslated text will fall back to English.

Important Notes

- You cannot create a new dataset and a new presentation playlist at the same time. You must work on only one task at a time and must save or clear your work (by selecting New from the Tool Bar) before going on to another task.
- Layer and PIP Elements may not always be modifiable within a presentation playlist. Presentation playlists consist of a list of datasets

whose playlist files have been linked via the `include` keyword. Layer and PIP Elements specified inside the linked dataset may not be editable because they are defined within a different file (i.e. the dataset playlist.sos file, not the presentation playlist file). Editing these elements would require editing the linked dataset, which is not allowed. For example, you cannot modify or delete an existing Layer/PIP, but you can add a new Layer/PIP. You also cannot delete an Audio or Label Element, but you can modify them (i.e. select a different audio file or label file from the Element Tab).

- You cannot resize or move Base Data, so that is why no yellow corner shows up on Base Data in the Preview when you click on it.
- If you load a dataset and then press the Play button and you notice that the Time field is updating but the Frame # is not updating, this is likely because the Time to dwell on first frame (milliseconds) (`firstdwell` in SOS) has been set to a non-zero value. This is the same for Time to dwell on last frame (milliseconds) (`lastdwell` on SOS). These attributes are shown in the Animation Tab.
- If you click on an Element in the Track View, the Element gets highlighted in the Preview. If you find that no Element was highlighted in the Preview, the Show/Hide button of that Element in the Track View may be set to Hide. For PIPs, the PIP might have a Delay time or Fadein time set to values that prevent the PIP from showing up until a specified animation time. Or PIPs or Layers might have an Opacity value set to 0.0.
- One of the attributes for layers in the Element tab is a Layer is visible checkbox (corresponds to `layervisible` in SOS). If this is set to off (unchecked), the Layer will not be visible in the Preview, and the Layer in the Track View will have an Eye icon with a slash through it, indicating it is in Hide mode. The Eye icon will also be disabled. To show the Layer in the Preview, the Layer is visible checkbox must be set to on (checked) in order to enable the Eye icon.
- In the Preview, Labels have a semi-opaque background behind them. This is so that it is easier to see the Label in the Preview. This background does not show up on SOS.
- The VPLe does not support the deprecated `background` keyword.
- Datasets with KML and WMS data are currently not supported.

- The ‘Skip every N frames while animating’ attribute (`skip` keyword in SOS) can be set in the Animation Tab and will appear on SOS, however, it is ignored during playback of the dataset in the VPLe Preview.
- Negative values for Start dataset on frame in the Animation Tab (`startframe` keyword in SOS) cannot be set using the VPLe.
- Sometimes, when you first load a dataset that has movie data, the movie will not show up unless you press the Play button.
- Limitations for a dataset that contains a directory of images that may cause a dataset’s data to get out of sync during playback:
 - Images whose resolution is greater than 4096 in width.
 - Frames per second (fps) greater than 25 or 30.
 - A dataset with many image directories (for example, image directories specified via many Layers and PIPs) running at high frame rates.

Glossary

General SOS Definitions

Dataset Playlist: SOS datasets are located in the `/shared/sos/media` or `/shared/sos/rt` folders on your SOS computer. With the exception of the `/shared/sos/media/site-custom` folder, datasets contained within those two folders are not editable. Each dataset is contained within its own folder, and within each dataset’s folder is a `playlist.sos` file (a variation, such as `playlist_audio.sos` may also exist), along with its content, such as movie or image files.

For example, the Blue Marble dataset’s `playlist.sos` file is located on your SOS computer in the following folder:

```
/shared/sos/media/land/blue_marble/blue_marble/
```

A dataset’s `playlist.sos` file uses keyword-value pairs to define a dataset’s content/imagery as a Base Layer or a set of Layers, PIPs, and Labels, as well as global attributes such as name and frames per second (fps). The attributes in the VPLe’s Tab View are what gets written to the `playlist.sos` file.

For example, the Blue Marble dataset’s `playlist.sos` file contains the following:

```
name = Blue Marble
data = 4096.jpg
```

```
fps = 40
tiltx = 23.5
category = land
catalog_url = http://sos.noaa.gov/Datasets/dataset.php?id=82
majorcategory = Land
```

Live Program: Live programs are SOS presentations that have been created by users of SOS, including scientists, educators, museum staff and student interns. They are carefully crafted presentations that use SOS datasets to tell a story and teach audiences about a specific topic such as ocean currents or extreme weather events. Included in each Live Program is an SOS presentation playlist (i.e. a collection of datasets) and a script with notes for presenters and sometimes supplementary educational materials (i.e. clicker questions and classroom lesson plans). Please see the SOS website > Education tab > Live Programs page for more information.

Presentation Playlist: A presentation playlist is a collection of datasets grouped together in a list for a presentation. Every presentation playlist ends with the .sos extension (for example, demo.sos). Presentation playlists are typically located in the /home/sos/sosrc directory or the /home/sosdemo/sosrc on the SOS computer.

Presenter Notes: A set of notes that can be accessed from the iPad SOS Remote app to help guide a presenter through a presentation. Presenter Notes are located at the end of a presentation playlist file and can be directly typed into that file or can be saved to that file by using the VPLE's Presenter Notes section in the Presentation Mode.

Site-Custom Dataset: A Site-Custom dataset is a dataset that has been created by a site that is not part of the NOAA-managed SOS Data Catalog. Custom datasets should be located in the /shared/sos/media/site-custom folder.

Contact

Please contact sos.gsd@noaa.gov if you have any questions or feedback regarding the SOS Visual Playlist Editor.